

**West Virginia Department of Environmental Protection
Division of Air Quality**

Joe Manchin, III
Governor

Randy C. Huffman
Cabinet Secretary

Permit to Operate



Pursuant to
Title V
of the Clean Air Act

Issued to:
City of Charleston
City of Charleston Sanitary Landfill /South Park Road
R30-03900461-2010

John A. Benedict
Director

Issued: [Date of issuance] • Effective: [Equals issue date plus two weeks]

Expiration: [5 years after issuance date] • Renewal Application Due: [6 months prior to expiration]

Permit Number: **R30-03900461-2010**
Permittee: **City of Charleston**
Facility Name: **City of Charleston Sanitary Landfill**
Permittee Mailing Address: **P. O. Box 2749, Charleston, WV 25330**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Charleston, Kanawha County, West Virginia
Facility Mailing Address:	Same as above
Telephone Number:	(304) 925-1192
Type of Business Entity:	Government Agency
Facility Description:	The Charleston Sanitary Landfill is a municipal solid waste (MSW) management facility. The landfill accepts municipal solid waste, construction/demolition/debris (CDD), and approved residual waste streams.
SIC Codes:	Primary 4953; Secondary N/A; Tertiary N/A
UTM Coordinates:	445.92 km Easting • 4240.52 km Northing • Zone 17

Permit Writer: U.K.Bachhawat

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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1.0 Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
Landfill Areas					
01	01-C1	Area C1 – Closed and Capped	1971	166,448 Mg	None
01	01-A	Area A – Closed and Capped	1979	305,519 Mg	None
01	01-C	Area C - Active	1995 See Note (1) below.	5,114,656 Mg	Vent Flares 01C to 20C, Engines 21C,22C and Flare 23C
Refuse Incinerators (Flare)					
01-03C	01-03E	Refuse Gas Incinerators	2005	50 SCFM	N/A
04-06C	04-06E	Refuse Gas Incinerators	2006	50 SCFM	N/A
07C	07E	Refuse Gas Incinerator	2007	50 SCFM	N/A
08-20C	08-20E	Refuse Gas Incinerators	TBD	50 SCFM	N/A
Engines					
21C	21E	Engine-RICE	TBD	1468 bhp/1800 rpm	N/A
22C	22E	Engine-RICE	TBD	1468 bhp/1800 rpm	N/A
GCCS Plant Flare					
23C	23E	GCCS Plant Flare	2009	2000 CFM	
Miscellaneous					
LCS	LCS	Leachate Collection System	1994	N/A	N/A
TK 12	TK 12	Leachate Tank	1994	150,000 Gal.	None
TK 13	TK 13	Leachate Tank	1997	249,000 Gal	None

- (1) Permit action R30-03900461-2005 (MM02) accounted for the installation of up to two (2) engines (21C & 22C) and one flare (23C) additional to the twenty passive flares (01C through 20C). The permittee's installation and start-up schedule is subject to change at the permittee's discretion, and installation of each control device is voluntary and not subject to a regulatory or compliance schedule under minor modification MM02.

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-2667A	7/1/2009

2.0 General Conditions

2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments	NSPS	New Source Performance
CBI	Confidential Business Information		Standards
CEM	Continuous Emission Monitor	PM	Particulate Matter
CES	Certified Emission Statement	PM₁₀	Particulate Matter less than 10µm in diameter
C.F.R. or CFR	Code of Federal Regulations		
CO	Carbon Monoxide	pph	Pounds per Hour
C.S.R. or CSR	Codes of State Rules	ppm	Parts per Million
DAQ	Division of Air Quality	PSD	Prevention of Significant Deterioration
DEP	Department of Environmental Protection	psi	Pounds per Square Inch
FOIA	Freedom of Information Act	SIC	Standard Industrial Classification
HAP	Hazardous Air Pollutant		
HON	Hazardous Organic NESHAP	SIP	State Implementation Plan
HP	Horsepower	SO₂	Sulfur Dioxide
lbs/hr or lb/hr	Pounds per Hour	TAP	Toxic Air Pollutant
LDAR	Leak Detection and Repair	TPY	Tons per Year
m	Thousand	TRS	Total Reduced Sulfur
MACT	Maximum Achievable Control Technology	TSP	Total Suspended Particulate
		USEPA	United States Environmental Protection Agency
Mg	Megagram		
mm	Million	UTM	Universal Transverse Mercator
mmBtu/hr	Million British Thermal Units per Hour	VEE	Visual Emissions Evaluation
		VOC	Volatile Organic Compounds
mmft³/hr or mmcf/hr	Million Cubic Feet Burned per Hour		
NA or N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NMOC	Nonmethane Organic Compounds		
NO_x	Nitrogen Oxides		

2.3. Permit Expiration and Renewal

- 2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]
- 2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]
- 2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]
- 2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

- 2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

- 2.5.1. This permit shall be reopened and revised under any of the following circumstances:
 - a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§30-6.6.a.1.A. or B.
 - b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.
 - c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

- 2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

- 2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

- 2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

- 2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

- 2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:
- a. The change must meet all applicable requirements and may not violate any existing permit term or condition.
 - b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
 - c. The change shall not qualify for the permit shield.
 - d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.
 - e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

- f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

- 2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.

[45CSR§30-5.8]

- 2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.

[45CSR§30-5.8.a.]

- 2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

- a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or
- b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

- 2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

[45CSR§30-2.39]

2.12. Reasonably Anticipated Operating Scenarios

2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

- a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.
- b. The permit shield shall extend to all terms and conditions under each such operating scenario; and
- c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

- 2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:
- a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
 - b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

- 2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

[45CSR§30-5.1.f.2.]

2.17. Emergency

- 2.17.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

[45CSR§30-5.7.a.]

- 2.17.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 45CSR§30-5.7.c. are met.

[45CSR§30-5.7.b.]

- 2.17.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The permitted facility was at the time being properly operated;
- c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

- d. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, the permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[45CSR§30-5.7.c.]

- 2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

[45CSR§30-5.7.d.]

- 2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

[45CSR§30-5.7.e.]

2.18. Federally-Enforceable Requirements

- 2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.

[45CSR§30-5.2.a.]

- 2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

- 2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

- 2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

[45CSR§30-4.2.]

2.21. Permit Shield

- 2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically

identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.

[45CSR§30-5.6.a.]

2.21.2. Nothing in this permit shall alter or affect the following:

- a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or
- b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.
- c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.

[45CSR§30-5.3.e.3.B. and 45CSR38]

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.

[45CSR§30-5.1.e.]

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.

[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

- a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.
- b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

- c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

- 2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.

[45CSR§30-5.1.a.2.]

3.0 Facility-Wide Requirements

3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40 C.F.R. §61.145(b) and 45CSR34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2]
- 3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality.
[W.Va. Code § 22-5-4(a)(14)]
- 3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.
 - c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.
- [40 C.F.R. 82, Subpart F]

- 3.1.8. **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.

[40 C.F.R. 68]

- 3.1.9. No person shall cause, suffer, allow or permit fugitive particulate matter to be discharged beyond the boundary lines of the property on which the discharge originates or at any public or residential location, which causes or contributes to statutory air pollution.

[45CSR§17-3.1.]

- 3.1.10. The permittee shall submit a control program upon the request of the Secretary, when the permitted facility is in violation of rule 45CSR17. The Secretary may require the permittee to utilize a system to minimize fugitive particulate matter that may include, but is not limited to, the following:

- a. Use, where practicable, of water or chemicals for control of particulate matter in demolition of existing buildings or structures, construction operations, grading of roads or the clearing of land;
- b. Application of asphalt, water or suitable chemicals on unpaved roads, material stockpiles and other surfaces which can create airborne particulate matter;
- c. Covering of material transport vehicles, or treatment of cargo, to prevent contents from dripping, sifting, leaking or otherwise escaping and becoming airborne, and prompt removal of tracked material from roads or streets.

[45CSR§§17-3.2. & 4.1.]

- 3.1.11. When emissions on an annual basis of one or more of the greenhouse gases listed below are greater than the *de minimis* amounts listed below, all greenhouse gases emitted above the *de minimis* amounts shall be reported to the Secretary under 45CSR§42-4. (see condition 3.5.10.):

Greenhouse Gas Compound	tons/year
carbon dioxide	10,000
methane	476
nitrous oxide	32.6
hydrofluorocarbons	0.855
perfluorocarbons	1.09
sulfur hexafluoride	0.42

[45CSR§42-3.1., State-Enforceable only.]

3.2. Monitoring Requirements

- 3.2.1. *[Reserved]*

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:
- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.
 - b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.
 - c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

[WV Code § 22-5-4(a)(15) and 45CSR13]

3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:
- a. The date, place as defined in this permit and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;

- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

[45CSR13, R13-2667, 4.4.1; 45CSR§30-5.1.c.2.A.]

- 3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.

[45CSR§30-5.1.c.2.B.]

- 3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§30-5.1.c. State-Enforceable only.]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

[45CSR§§30-4.4. and 5.1.c.3.D.]

- 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

[45CSR§30-5.1.c.3.E.]

- 3.5.3. Except for the electronic submittal of the annual certification to the USEPA as required in 3.5.5 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, mailed first class or by private carrier with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Phone: 304/926-0475
FAX: 304/926-0478

If to the US EPA:

Associate Director
Office of Enforcement and Permits Review
(3AP12)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

- 3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality.
[45CSR§30-8.]
- 3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The annual certification to the USEPA shall be submitted in electronic format only. It shall be submitted by e-mail to the following address: R3_APD_Permits@epa.gov. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification.
[45CSR§30-5.3.e.]
- 3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4.
[45CSR§30-5.1.c.3.A.]
- 3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.
- 3.5.8. **Deviations.**
- a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:
1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.
 2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.
 3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.
 4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

- b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

[45CSR§30-5.1.c.3.B.]

- 3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

[45CSR§30-4.3.h.1.B.]

- 3.5.10. **Greenhouse Gas Reporting Requirements.** When applicable, as determined in permit condition 3.1.11. above, greenhouse gas emissions shall be reported pursuant to 45CSR§42-4. as follows:

- a. In accordance with a reporting cycle provided by the Secretary, affected sources shall report to the Secretary the quantity of all greenhouse gases emitted above *de minimis* amounts in the years specified by the Secretary.

[45CSR§42-4.1., State-Enforceable only.]

- b. Affected sources shall only be required to report annual quantities of anthropogenic non-mobile source greenhouse gases emitted at the stationary source, and shall not be required to report biogenic emissions of greenhouse gases.

[45CSR§42-4.2., State-Enforceable only.]

- c. Reports of greenhouse gas emissions submitted to the Secretary under 45CSR§42-4. shall be signed by a responsible official and shall include the following certification statement: “I, the undersigned, hereby certify that the data transmitted to the West Virginia Department of Environmental Protection is true, accurate, and complete, based upon information and belief formed after reasonable inquiry.

[45CSR§42-4.5., State-Enforceable only.]

3.6. Compliance Plan

- 3.6.1. *[Reserved]*

3.7. Permit Shield

- 3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

- 3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

- a. None requested for shield.

4.0 Source-Specific Requirements [Landfill Areas (*Emission Points - 01-C1, 01-A, 01-C*)]

4.1. Limitations and Standards

4.1.1. Requirements When Reported NMOC Emission Rate is ≥ 50 Mg/yr. - If the reported nonmethane organic compounds (NMOC) emission rate, in the initial, annual or revised 5-year report, is equal to or exceeds 50 megagrams per year, the permittee shall:

- a. Submit a Landfill Gas (LFG) collection and control system design plan prepared by a professional engineer within 1 year of the NMOC emission report in compliance with 40 C.F.R. §60.752(b)(2), or
- b. Within 180 days of the emission rate report, demonstrate, using a site specific NMOC concentration (Tier 2), that NMOC emissions do not equal or exceed 50 megagrams per year, submit a revised NMOC emission rate report, resume annual NMOC emission rate reporting, and retest the site specific NMOC concentration every 5 years. This shall be completed in accordance with 40 C.F.R. §60.754(a)(3).

Reporting requirements shall be completed as stated in 4.5.1. and 4.5.2.

[45CSR23, 40 C.F.R. §60.757, and 40 C.F.R. §60.754(a)(3)]

4.1.2. Requirements When Reported NMOC Emission Rate is ≥ 50 Mg/yr. (when using site specific C_{NMOC}) - If, using a site specific NMOC concentration, the NMOC emission rate is equal to or exceeds 50 megagrams per year, the permittee shall:

- a. Submit a Landfill Gas (LFG) collection and control system design plan prepared by a professional engineer within 1 year of the NMOC emission report in compliance with 40 C.F.R. §60.752(b)(2), or
- b. Within 1 year of the emission rate report, demonstrate using a site specific methane generation constant (Tier 3), that NMOC emissions do not equal or exceed 50 megagrams per year, submit a revised NMOC emission rate report and resume annual NMOC emission rate reporting. This shall be completed in accordance with 40 C.F.R. §60.754(a)(4).

Reporting requirements shall be completed as stated in 4.5.1. and 4.5.2

[45CSR23, 40 C.F.R. §60.757 and 40 C.F.R. §60.754(a)(4)]

4.1.3. Within 30 months of the first annual emission rate report in which the emission rate equals or exceeds 50 megagrams per year of NMOC and the permittee cannot demonstrate compliance with Tier 2 or Tier 3 calculations, the permittee shall install a landfill gas collection and control system which conforms to 40 C.F.R. §60.759 and:

- a. Is designed to handle the maximum expected gas flow rate from the entire area of the landfill;
- b. Collects gas from each area, cell or group of cells in which initial solid waste has been in place for a period of:
 1. 5 years or more if active; or
 2. 2 years or more if closed or at final grade;

- c. Operate the collection system with negative pressure at each wellhead except conditions identified under 40 C.F.R. §50.753.b.
- d. Operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C and with either nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish higher value if they show supporting data that the elevated parameters does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.
- e. Collects gas at a sufficient extraction rate;
- f. Is designed to minimize off-site migration of subsurface gas;
- g. Reduces NMOC by 98 weight percent or for an enclosed combustion device, either reduces NMOC by 98 weight percent or reduces the outlet concentration to less than 20 ppmv, dry as hexane, at 3 percent oxygen;
- h. Maintains the methane concentration at the surface of the landfill at less than 500 ppmv above the background level.

[45CSR23, 40 C.F.R. §60.752, and 40 C.F.R. §60.753]

- 4.1.4. **LFG Collection and Control System Design Plan** - The landfill gas collection and control design plan shall be submitted to the Division of Air Quality within one year after submitting the NMOC emission rate report, reporting an NMOC emission rate which equals or exceed 50 megagrams per year.
 - a. If the permittee is required to install a gas collection and control system, the permittee shall apply for a Title V operating permit significant permit revision within 90 days of the date of the approval of the gas collection and control plan

[45CSR23 and 40 C.F.R. §60.757(c)]

- 4.1.5. The particulate matter discharged from each flare (01C, 02C, 03C, 04C, 05C, 06C, 07C, 08C, 09C, 10C, 11C, 12C, 13C, 14C, 15C, 16C, 17C, 18C, 19C, and 20C) shall not exceed 0.59 lb/hr.
[45CSR§6-4.1., and 45CSR13, R13-2667, 4.1.2.]
- 4.1.6. Visible particulate matter emissions from each flare (01C, 02C, 03C, 04C, 05C, 06C, 07C, 08C, 09C, 10C, 11C, 12C, 13C, 14C, 15C, 16C, 17C, 18C, 19C, 20C, and 23C) shall not exceed twenty (20%) percent opacity.
[45CSR§6-4.3., and 45CSR13, R13-2667, 4.1.6.]
- 4.1.7. The provisions of permit condition 4.1.6. shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up.
[45CSR§6-4.4., and 45CSR13, R13-2667, 4.1.7.]
- 4.1.8. The emission of particles of unburned or partially burned refuse or ash from the flares (01C, 02C, 03C, 04C, 05C, 06C, 07C, 08C, 09C, 10C, 11C, 12C, 13C, 14C, 15C, 16C, 17C, 18C, 19C, 20C, and 23C) which are large enough to be individually distinguished in the open air shall not be allowed or permitted.
[45CSR§6-4.5.]

4.1.9. The flares(01C, 02C, 03C, 04C, 05C, 06C, 07C, 08C, 09C, 10C, 11C, 12C, 13C, 14C, 15C, 16C, 17C, 18C, 19C, 20C, and 23C) including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.
[45CSR§6-4.6., and 45CSR13, R13-2667, 4.1.10.]

4.1.10. No person shall construct, modify or relocate any incinerator without first obtaining a permit in accordance with the provisions of W. Va. Code §§22-5-1 et seq., 45CSR13, 45CSR14, and 45CSR19, as applicable, provided that, and notwithstanding the provisions of 45CSR13, flares and flare stacks meeting the requirements of 45CSR§§6.1.a. & 6.1.b. shall not be required to obtain a permit under 45CSR13:
[45CSR§6-6.1.]

4.1.11. The facility shall not employ more than twenty (20) passive vent flares as identified as 01C through 20C and an active gas collection system with one (1) flare (23C).
[45CSR13, R13-2667, 4.1.1]

4.1.12. The particulate matter discharged from the GCCS flare (23C) shall not exceed 1.35 lb/hr.
[45CSR13, R13-2667, 4.1.3; 45CSR§6-4.1]
Note: Meeting the R13-2667 limit of 1.35 lb/hr shall show compliance with 45CSR§6-4.1 limit of 23.46 lb/hr. Please refer to the fact sheet for detailed calculation.

4.1.13. The maximum combined emissions from all the flares (01C-20C, 23C) shall not exceed the following:

Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
Nitrogen Oxides	4.20	18.40
Carbon Monoxide	22.20	97.24
Sulfur Dioxide	0.98	4.29
Volatile Organic Compounds	0.03	0.14
Hydrochloric Acid	0.47	2.06

[45CSR13, R13-2667, 4.1.4.]

4.1.14. The maximum landfill gas throughput to the flares (01C-20C, 23C) shall not exceed 1,752 MM scf/yr. Compliance shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.
[45CSR13, R13-2667, 4.1.5]

4.1.15. The GCCS flare (23C) shall be operated, with a flame present at all times whenever emissions may be vented to them, except during SSM (Startup, Shutdown, Malfunctions) events.
[45CSR13, R13-2667, 4.1.8]

4.1.16. The permittee is not required to conduct a flare compliance assessment for concentration of sample (i.e. Method 18) and tip velocity (i.e. Method 2) for the GCCS flare (23C) until such time as the Director requests a flare compliance assessment to be conducted in accordance with section 4.3.2.
[45CSR13, R13-2667, 4.1.9]

4.2. Monitoring Requirements

- 4.2.1. For the purpose of determining compliance with the opacity limits of 45CSR6, visible emission checks of the vent flares (01C, 02C, 03C, 04C, 05C, 06C, 07C, 08C, 09C, 10C, 11C, 12C, 13C, 14C, 15C, 16C, 17C, 18C, 19C, 20C, and 23C) shall be conducted. The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60, Appendix A, Method 22 or from the lecture portion of the 40 C.F.R. Part 60, Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source flare for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions

If visible emissions are present at a source(s) for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

[45CSR§30-5.1.c., and 45CSR13, R13-2667, 4.3.1.]

- 4.2.2. In order to demonstrate compliance with the requirements of 4.1.15, the permittee shall monitor the presence or absence of a flare pilot flame using a thermocouple or any other equivalent device, except during SSM events.
[45CSR13, R13-2667, 4.2.1]

- 4.2.3. The permittee shall monitor the throughput of landfill gas fed to the GCCS flare (23C) and flares (01C-20C) on a monthly basis. Records of such monitoring shall be maintained in accordance with 3.4.2 of this permit.
[45CSR13, R13-2667, 4.2.2 and 45CSR§30-5.1.c.]

- 4.2.4. To show compliance with the NO_x, CO, SO₂, VOC and HCl limits in Sections 4.1.13 monthly NO_x, CO, SO₂, VOC and HCl emissions from flares (01C-020C, 23C) shall be calculated by the 15th day of the subsequent month.

A twelve month running total of emissions shall be maintained to verify compliance with the long term (TPY) emission limitations. Each month a new twelve month total shall be calculated using the previous twelve months data. Records indicating the twelve month rolling total emissions shall be maintained on site or at a reasonably available location.

[45CSR§30-5.1.c.]

Note: This compliance demonstration will not be required if flare 23C is only used because NO_x, CO, SO₂, VOC and HCl limits in Sections 4.1.13 are the maximum potential emissions from flare 23C.

4.3. Testing Requirements

- 4.3.1. At such reasonable times as the Director may designate, the operator of any incinerator shall be required to conduct or have conducted stack tests for flares 01C, 02C, 03C, 04C, 05C, 06C, 07C, 08C, 09C, 10C, 11C, 12C, 13C, 14C, 15C, 16C, 17C, 18C, 19C, 20C, and 23C to determine the particulate matter loading, by using 40 C.F.R. Part 60, Appendix A, Method 5 or other equivalent EPA approved method approved by the Director, in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or the Director's authorized representative, may

at the Director's option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices. **[45CSR§6-7.1.]**

- 4.3.2. The Director may require the permittee to conduct a flare compliance assessment to demonstrate compliance with section 4.1.16 for the GCCS flare (23C). This compliance assessment testing shall be conducted in accordance with Test Method 18 for organics and Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60, as appropriate, or other equivalent testing approved in writing by the Director. Also, Test Method 18 may require the permittee to conduct Test Method 4 in conjunction with Test Method 18.
[45CSR13, R13-2667, 4.3.2]

4.4. Recordkeeping Requirements

- 4.4.1. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. These records shall include, but are not limited to:
- a. Current maximum design capacity, current amount of refuse in place, and year by year refuse accumulation rates.
 - b. Description, location, amount, and placement date of all nondegradable refuse including asbestos and demolition refuse placed in landfill gas collection and control.
 - c. Installation date and location of all vents, wells and flares.

These records shall be available on site for inspection by the Division of Air Quality and shall be current for the most recent five (5) years.

[45CSR23 and 40 C.F.R. §60.758]

- 4.4.2. The permittee shall maintain records of all monitoring data required by Section 4.2.1., documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). An example form is supplied as Appendix A of this permit. Should a visible emission observation be required to be performed per the requirements specified in METHOD 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note "out of service" (O/S) or equivalent.
[45CSR§30-5.1.c.]
- 4.4.3. For the purpose of demonstrating compliance with section 4.1.15 and 4.2.2, the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent. **[45CSR13, R13-2667, 4.4.3]**
- 4.4.4. For the purpose of demonstrating compliance with section 4.1.6 and 4.1.7, the permittee shall maintain records of the visible emission opacity tests conducted per Section 4.2.1.
[45CSR13, R13-2667, 4.4.4]

- 4.4.5. The permittee shall maintain a record of the landfill gas throughput through the GCCS flare (23C) and flares (01C-20C) to demonstrate compliance with the landfill gas throughput limit set forth in section 4.1.14. **[45CSR13, R13-2667, 4.4.5 and 45CSR§30-5.1.c.]**
- 4.4.6. All records required under Sections (4.4.3 - 4.4.5) shall be maintained on site by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official. **[45CSR13, R13-2667, 4.4.6 and 45CSR§30-5.1.c.]**

4.5. Reporting Requirements

- 4.5.1. **Annual NMOC Emission Report** - Not later than July 1 of each year, unless the permittee elects to submit a five-year NMOC emission rate report, the permittee must submit an annual NMOC emission rate report to the Division of Air Quality. The NMOC emission rate shall be calculated in accordance with the methodology contained in 40 C.F.R. §60.754(a)(1). The report shall include all data, calculations, sample reports and measurements used to estimate the emissions. **[45CSR23 and 40C.F.R §60.757(b)]**
- 4.5.2. **5-year NMOC Report** - If the estimated NMOC emission rate, as presented in the annual report is less than 50 Mg/yr in each of the next five consecutive years following the initial NMOC report, the permittee may elect to submit an estimate of the NMOC emission rate for the next five year period in lieu of the annual report. The estimate shall include the following:
- a. Current amount of the solid waste in place, and
 - b. The estimated waste acceptance rate for each year of the five years for which an NMOC emission rate is estimated.
- The NMOC emission rate shall be calculated in accordance with the methodology contained in 40 C.F.R. §60.754(a)(1). All data, calculations, sample reports and measurements upon which the estimate is based shall be presented with the report to the Division of Air Quality. The estimate shall be revised at least every five (5) years. **[45CSR23 and 40 C.F.R. §60.757(b)(1)(ii)]**
- 4.5.3. **Revision of 5-year NMOC Report** - If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Division of Air Quality. The revised estimate shall cover the five year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate and shall be submitted within 180 days of the first exceedance of the estimated waste acceptance rate. **[45CSR23 and 40 C.F.R. §60.757(b)(1)(ii)]**
- 4.5.4. **Closure Report** - The permittee shall submit a closure report to the Division of Air Quality within 30 days of the date the MSW landfill stopped accepting waste. **[45CSR23, 40 C.F.R. §60.758 and 40 C.F.R. §60.757(d)]**
- 4.5.5. Any violation(s) of the allowable visible emission requirement for any emission source discovered during observations using 40 C.F.R. Part 60, Appendix A, Method 9 or 22 must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and

shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

[45CSR13, R13-2667, 4.5.1.]

- 4.5.6 Any deviation(s) from the flare design and operation criteria in Section 4.1.16 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of discovery of such deviation.

[45CSR13, R13-2667, 4.5.2.]

4.6. Compliance Plan

[Reserved]

5.0 Source-Specific Requirements [Reciprocating Internal Combustion Engines (21C, 22C)]

5.1. Limitations and Standards

- 5.1.1. The GCCS reciprocating internal combustion engines (21C, 22C) shall be operated and maintained in accordance with the manufacturer's recommendations and specifications and in a manner consistent with good operating practices and shall only burn natural gas.

[45CSR16, 45CSR13, R13-2667, 5.1.1]

- 5.1.2. Maximum emissions from each of the 1,468 hp landfill gas fired reciprocating engines, GE Genset JGS 320 GS-L.L (21C, 22C) shall not exceed the following limits:

Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
Nitrogen Oxides	3.90	17.08
Carbon Monoxide	7.20	31.54
Particulate Matter	1.44	6.31

[45CSR16, 45CSR13, R13-2667, 5.1.2]

- 5.1.3. The quantity of landfill gas that shall be consumed in each of the 1,468 hp landfill gas fired reciprocating engines, GE Genset JGS 320 GS-L.L (21C, 22C) shall not exceed 26,867 cubic feet per hour per compressor engine.

[45CSR16, 45CSR13, R13-2667, 5.1.3]

5.2. Monitoring Requirements

[Reserved]

5.3. Testing Requirements

[Reserved]

5.4. Recordkeeping Requirements

To demonstrate compliance with section 5.1.2 and 5.1.3 the permittee shall maintain records of the amount of landfill gas consumed in 21C and 22C. Said records shall be maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

[45CSR13, R13-2667, 5.2.1]

5.5. Reporting Requirements

[Reserved]

5.6. Compliance Plan

[Reserved]

6.0 Source-Specific Requirements [Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (21C, 22C)]

6.1 Limitations and Standards

§ 63.6590 What parts of my plant does this subpart (40 C.F.R. 63 Subpart ZZZZ) cover?

- (c) Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

- (1) A new or reconstructed stationary RICE located at an area source;
[45CSR34, 40CFR§63.6590]

Note: In the following sections, any reference to “this subpart” shall mean 40 C.F.R. Part 60, subpart JJJJ.

6.2 Emission Standards for Owners and Operators

- 6.2.1. Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.
[45CSR16, 40CFR§60.4233(e), 45CSR13, R13-2667, 6.2.1]
- 6.2.2. Owners and operators of any modified or reconstructed stationary SI ICE subject to this subpart must meet the requirements as specified in paragraph a. of this section.
- a. Owners and operators of stationary SI landfill/digester gas ICE engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph 40C.F.R.§60.4233(e) for stationary landfill/digester gas engines.
[45CSR16, 40CFR§60.4233(f)(5), 45CSR13, R13-2667, 6.2.2]
- 6.2.3. Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in 40 C.F.R § 60.4233(e).
[45CSR16, 40CFR§60.4233(h), 45CSR13, R13-2667, 6.2.3]
- 6.2.4. Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.
[45CSR16, 40CFR§60.4234, 45CSR13, R13-2667, 6.2.4]

6.3. Other Requirements for Owners and Operators

- 6.3.1. After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in §60.4233.
[45CSR16, 40CFR§60.4236(a), 45CSR13, R13-2667, 6.5.1]
- 6.3.2. After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010.
[45CSR16, 40CFR§60.4236(b), 45CSR13, R13-2667, 6.3.2]
- 6.3.3. For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011.
[45CSR16, 40CFR§60.4236 (c), 45CSR13, R13-2667, 6.3.3]
- 6.3.4. The requirements of this section do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location.
[45CSR16, 40CFR§60.4236(e), 45CSR13, R13-2667, 6.3.4]

6.4. Compliance Requirements for Owners and Operators

- 6.4.1. If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs a and b of this section.
 - a. Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in 40C.F.R §60.4243(a).
 - b. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs b.1 and 2 of this section.
 - 1. If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.
 - 2. If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.
- [45CSR16, 40CFR§60.4243(b), 45CSR13, R13-2667, 6.4.1]**

6.5. Testing Requirements for Owners and Operators

- 6.5.1. Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

- a. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart.
- b. You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.
- c. You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.
- d. To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 1})$$

Where:

ER = Emission rate of NO_x in g/HP-hr.

C_d = Measured NO_x concentration in parts per million by volume (ppmv).

1.912×10⁻³ = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

- e. To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 2})$$

Where:

ER = Emission rate of CO in g/HP-hr.

C_d = Measured CO concentration in ppmv.

1.164×10⁻³ = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

- f. For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 3})$$

Where:

ER = Emission rate of VOC in g/HP-hr.

C_d= VOC concentration measured as propane in ppmv.

1.833×10⁻³ = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

- g. If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{25A}}{C_{Ai}} \quad (\text{Eq. 4})$$

Where:

RF_i= Response factor of compound i when measured with EPA Method 25A.

C_{Mi}= Measured concentration of compound i in ppmv as carbon.

C_{Ai}= True concentration of compound i in ppmv as carbon.

$$C_{i,corr} = RF_i \times C_{i,meas} \quad (\text{Eq. 5})$$

Where:

C_{i,corr}= Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

C_{i,meas}= Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{Pq1} = 0.6098 \times C_{i,corr} \quad (\text{Eq. 6})$$

Where:

C_{Peq} = Concentration of compound i in mg of propane equivalent per DSCM.

[45CSR16, 40CFR§60.4244(a),(b),(c),(d),(e),(f),(g), 45CSR13, R13-2667, 6.5.1]

6.6. Notification, Reports, and Records for Owners and Operators

- 6.6.1. Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.
- a. Owners and operators of all stationary SI ICE must keep records of the information in paragraphs a.1 through 4 of this section.
 1. All notifications submitted to comply with this subpart and all documentation supporting any notification.
 2. Maintenance conducted on the engine.
 3. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90 and 1048.
 4. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.
 - b. For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.
 - c. Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs c.1 through 5 of this section.
 1. Name and address of the owner or operator;
 2. The address of the affected source;
 3. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
 4. Emission control equipment; and
 5. Fuel used.
 - d. Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.

[45CSR16, 40CFR§§60.4245(a), (b), (c), (d), 45CSR13, R13-2667, 6.6.1]

7.0 Source-Specific Requirements [Leachate Tanks (TK12 & TK13)]

7.1. Limitations and Standards

[Reserved]

7.2. Monitoring Requirements

- 7.2.1. The owner or operator shall keep copies of all records required by this section, except for the record required by section 7.2.2, for at least 2 years. The record required by section 7.2.2 will be kept for the life of the source.

[45CSR16, 40CFR§60.116b(a).]

- 7.2.2. The owner or operator of each storage vessel as specified in 40CFR§60.110b(a) (Section 7.2.1 of this permit) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

[45CSR16, 40CFR§60.116b(b).]

- 7.2.3. The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

- (1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of 40CFR§60.116(b).

[45CSR16, 40CFR§60.116b(f).]

7.3. Testing Requirements

[Reserved]

7.4. Recordkeeping Requirements

[Reserved]

7.5. Reporting Requirements

[Reserved]

7.6. Compliance Plan

[Reserved]

APPENDIX A - [Weekly/ Monthly/ Quarterly] Opacity Record
City of Charleston Sanitary Landfill
COMPANY ID NO. 039-00461
PERMIT NO. R30-03900461-2010

Date of Observation:

Data Entered by:

Reviewed by:

Date Reviewed:

Describe the General Weather Conditions:

Stack ID/Vent ID/ Emission Point ID	Stack/Vent/Emission Point Description	Time of Observation	Visible Emissions? Yes/No	Consecutive Months of Visual Emissions	Comments